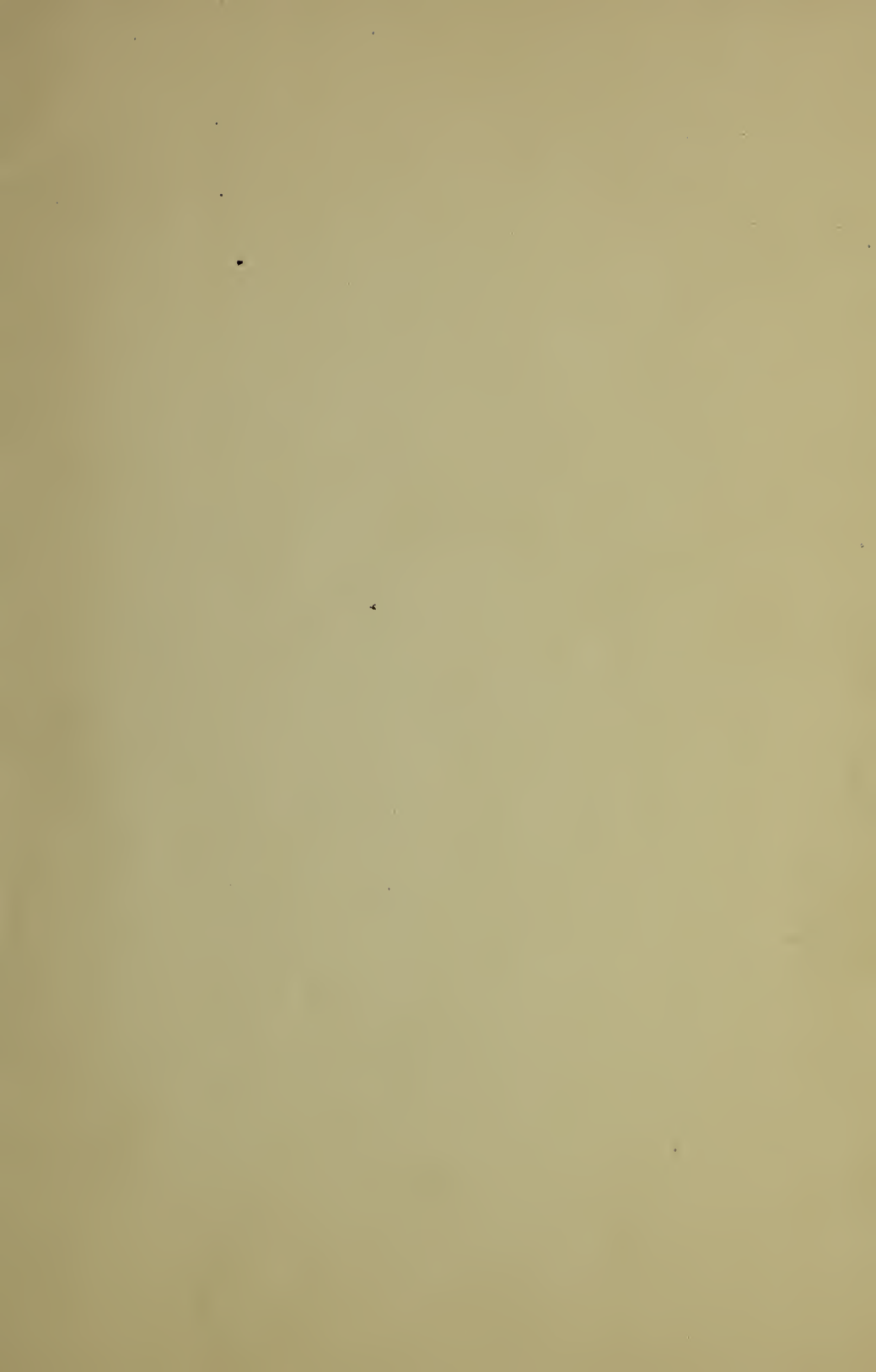


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DISCOURTE THE MASTER SCIENCE

BY L. H. KERRICK.





Yours very truly
L. W. Linnick,

Agriculture

The Master Science.

ADDRESS BY

L. H. KERRICK,

DELIVERED AT THE DEDICATION OF THE NEW
AGRICULTURAL BUILDING OF THE
UNIVERSITY OF ILLINOIS.

Champaign, Illinois, May 21, 1901.



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Agriculture the Master Science.

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[I F I should say that agriculture is the first—the greatest—the most honorable business of the world, I would only be saying again what the best and wisest men of every age have said before. But a great number of people do not so regard agriculture; they are prone to look upon it as a useful, possibly as a necessary business, albeit a very simple one, suited to the ability and uncultivated tastes of plain people. Almost any other vocation they esteem more honorable, and preferable to tilling the ground and tending the herd. This mistaken attitude toward agriculture is not universal, but it has been and is still far too general. In the common mind agriculture is the inferior—other callings the superior. The largest case in all history of “cart before the horse” is that one wherein so great a part of mankind have so persistently put agriculture to the rear—in the less honorable place, while other vocations are put to the front in the position of honor.

In the whole hook-up of our civilization this “wrong end to” position of things is strongly in evidence. This common underestimation of agri-

culture, and the common aversion or distaste for agricultural pursuits, and the general trend of people and institutions away from the farm have long been noted and deplored by observing and right thinking men.

They have profoundly affected all social, political and economic relations and conditions. They have upset the proper balance of city and rural population. There are too few people on the farms, too many in the cities. There are not enough people on the farm to do the work well, while in the city there are two or three times as many as are needed to do the work there. There is boundless room and unlimited living employment in the country, while there is crowding and poverty and strife and strikes in the city, for lack of living employment.

A few years ago there was a great strike on in Chicago. I do not remember what precipitated it—no matter, at bottom the cause of all strikes is too many people needing the same job. During this particular strike the storm for a while centered about some grain elevators. Thousands of men threatened to pull down or break in the elevators and help themselves to the wheat. At that time those elevators were filled with the cheapest wheat ever raised in the world; but there were so many people in Chicago who had no business there—no living business, that they could not earn enough to

buy enough to eat of the cheapest bread the world ever had.

This pulling away from the farms could not affect every other condition and institution and leave our greatest institution, our schools, unaffected.

And what a country of schools is this! Who can count our schools? They are like the stars which no man can number. But our schools, big, little and medium, public and private, have been dominated in their organization and in their teaching by this same, anything but farming, spirit. They have taught our farmers' boys and girls about everything under the sun except those very things they need and must know to make their work and business attractive, satisfying, successful.

The attitude of the schools toward agriculture has been something like this. Anybody can farm. You do not have to learn how to farm. You just know it without having to learn. There is not much to learn about it anyway. There is no science, no art about farming. You do not go to school to know how to farm better; you do not have to. You go to school to learn how to do something else, so you may not have to farm. Only those people who cannot do something else work at farming. Strange! All this is passing strange, since if we but think for a moment we know that had it not been for the farming which went before them, never a book would have been written, never a school house built on the earth.

Agriculture is the science of sciences, the art of arts.

When every other art and science shall have been thought and wrought out to its utmost limit, the science and practice of agriculture will still present boundless unexplored fields for work and research and reward, wherein every faculty of mind and body with which man is endowed may find the fullest, the most satisfying, the most inspiring exercise and employment.

Do not misunderstand me. I say nothing against our schools. They are good. They do their work well. That such a system of public and private schools as ours with its mighty teaching force and its vast material equipment, should have been evolved in so short a period of time is a matter to excite our wonder and to compel our highest admiration.

For zeal, for self-sacrifice, for untiring labors in behalf of our youth, that they may become intelligent, worthy men and women and patriotic citizens, I say of our whole great array of teachers, from the presidents of our universities and colleges to the humbler but not less useful district school teachers, there live no better, nobler, more helpful men and women than they.

But just as earnestly I say that our schools and our school teachers have been nearly all looking one way, and that way has been away from the farm. Is it anybody's fault? No; it is everybody's fault.

It is the colossal fault of our time and our generation, to underestimate the dignity, the beauty, the profit and the honor of farming and farm life.

This wrong attitude of our schools toward agriculture has of course tended strongly to draw young people from farm life to professional life. The schools have been turning out too many doctors, too many lawyers, too many professors. There is no need for them all, but they have been taken too often from the farm, where there is need of them. The professors have rather the better of it because they can go on helping to turn out more doctors and more lawyers and more professors.

To say the so-called learned professions are full, pressed down and running over, is only hinting at their actual condition. Something over a year ago I read in a Chicago paper an account of graduating exercises which took place at the Chicago University. Let me quote you verbatim a part of President Harper's address to the graduates, as it was reported:

"You who are now entering the world will find that poverty will be the strongest opponent to overcome. You who are entering life as lawyers need only to look at the papers to-day to find that the average lawyer does not earn his salt. Those who will become physicians will find that their only companion for a few years to come will be the wolf at the door; while those who go forth to teach need only to witness the struggles of the school teachers

in this city. The school board is beset with howls and wails for an increase of salaries."

This in that great and rich and growing metropolis, Chicago, a city affording as great or greater and more opportunities for men and women trained for the learned professions than any other city; yet even there the prospect held out to those graduates by the president was years of starvation. If some other fellows had not the strength to fast as long as these graduates then they might eventually get the other fellows' places.

The first duty of an educated, able-bodied man is to make his own living. The man who is not in some way, at some point, doing an amount of the world's necessary work equal to that required for the support of one man, is a burden on society.

Do any of you fear that President Draper or Dean Davenport will ever say to a class graduating from this agricultural college: Gentlemen:—You are going out to the farms. You have not mastered the whole of agricultural science, that will not be done by any living or yet to live, but you have done your work well in the college and you are well equipped for your business; however, I feel obliged to say to you that poverty will be the strongest opponent you will have to overcome. The average farmer is not earning his salt—that is, for his personal consumption, mind you, let alone the cattle and horse critters. The only companion you will have for some years to come will be the wolf at the door. * * *

I just as much expect to read of such a speech as that having been made here to a class graduating from this agricultural college as I expect to find myself to-morrow morning sitting on some distant star, reading that last night the cables of gravitation parted down here and the whole planetary outfit fell to everlasting smashup.

Thirty-four years ago there was organized here an industrial university. Not a university of the general sort but of another sort, a new kind of university. A university differing in its organization—differing in its leading studies and in its aims and purposes from those already established in many parts of the country. The courses of study in the colleges and universities existing when this new university was organized were adapted only to fit men for the so-called learned professions, law, medicine, etc. In this new university the leading studies were to be those related to agriculture and the mechanic arts. Whereas the other universities tended to withdraw their students from the pursuits of industry, this new university would aim by linking learning more closely to labor and by bringing the light of science more fully to the aid of the productive arts, to enamor the sons and the daughters of the farmer and the artisan with their pursuits. There is no law in Illinois establishing a university of the general or older sort. There never has been such a law. There is a law establishing an industrial university. If this university has any legal ex-

istence or standing, it is as an industrial university. By the intention of its founders, by its organic law, by its lawfully authorized courses of study, by the will of the people of Illinois, it is an industrial university, not less, not more.

In his address, delivered on the occasion of the inauguration of the Illinois Industrial University, that great man, Dr. Newton Bateman, said: "What, then, is the grand distinguishing feature, purpose, hope of this university? In my view it is to form a closer alliance between labor and learning—between science and the manual arts, between man and nature, between the human soul and God, as seen in and revealed through his works.

"It is to endeavor so to wed the intellect and hearts of the students we educate to the matchless attractions of rural and industrial life, that they will with their whole soul prefer and choose that life and consecrate to it the results of skill and power that may here be gained. These I hold to be the aims of this university. And we hope to attain them, not by a less extensive and thorough course of instruction than is given in other universities, but by a somewhat different course and more especially by emphasizing from the beginning to the end those studies and sciences which look away from literary and professional life and towards the pursuits of the agriculturist and the artisan."

Congress in 1862 made a liberal grant of land scrip to each state of the union for the endowment,

support, and maintenance of at least one college in the several states accepting the benefits of the grant, whose leading object should be to teach such branches of learning as related to agriculture and the mechanic arts, without excluding other scientific and classical studies and including military tactics, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

This act of congress was the origin of our university. The legislature of Illinois, by an act providing for the organization and maintenance of the Illinois Industrial University, re-enacted the act of congress in identical words.

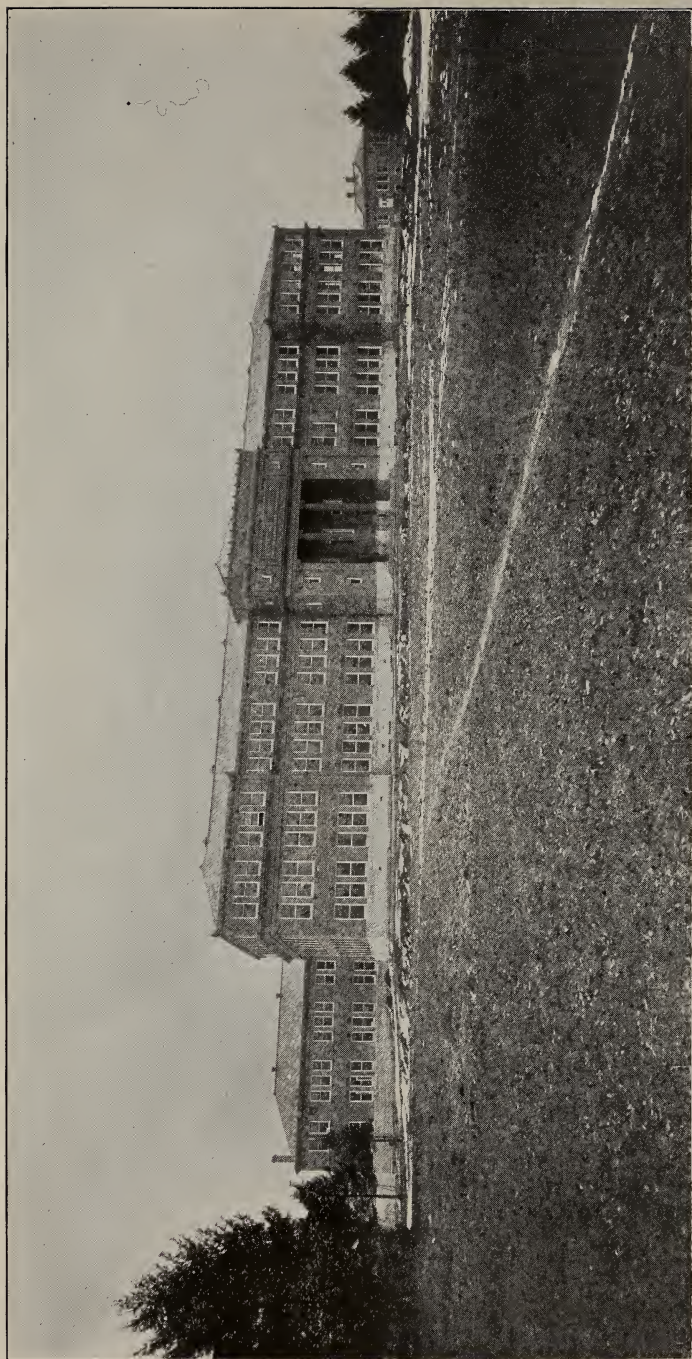
The state of Illinois might have organized and provided for the maintenance of a university of the established or general sort, having colleges of law, medicine, etc., etc., including a college of agriculture and mechanic arts, but she did not and has not. The perfectly obvious intent of the legislature was to establish a peculiar university, contradistinguished from that other kind, in that its leading studies should relate to agriculture and mechanic arts, other classical and scientific studies being permissible when and to the extent that they might subserve the single great purpose, namely: the thorough and liberal and complete education of the farmer and the artisan; this end and purpose being accomplished, the whole purpose of the university is accomplished. It was deemed by the

founders that there were enough of the universities of the other kind and that more were not needed. If no need in '67 of establishing a university of the general sort, what need now can there be when within the borders of our state there is building by private beneficence, without charge to any tax-payer, what will with scarcely a doubt soon become the most completely equipped, the most comprehensive in its round of learning and the most richly endowed university of the general sort in the world.

About three years ago when this university had been here more than thirty years, when in all there had been expended upon it \$4,000,000 or \$5,000,000, the Illinois Farmers' Institute appointed a committee to visit the university and see how it was faring with agriculture here.

The committee made its visit and investigation and reported that they found an agricultural plant worth about \$7,000—\$7,000! Shades of the founders! Excuse us farmers for what we could not help and forgive us for what we could help but did not.

But my friends I doubt very much if Turner and Bateman and Gregory and their co-laborers would have any harsh words for us if they could communicate with us. They saw how the educational wind was blowing from the farm to the town, from agricultural to professional life, before they went. It was only a breeze in their day, but may be from their spirit homes they have seen that breeze increase to a blizzard sweeping things toward the



AGRICULTURAL BUILDING, UNIVERSITY OF ILLINOIS.

town and toward the occupations of the town, as that other kind of blizzard sweeps the snows of the plain upon the hamlet in its path.

I am ready to believe that those good men, if they thought we could hear them, instead of chiding us would say, boys, you "done noble" even to hold down your little cow barn in such a gust as that.

I have not much to say about the \$7,000 plant. When the farmers heard about it, a movement to right things, general, intelligent, determined, united, irresistible, was begun. This great agricultural building is one of the fruits of that movement. The generous appropriation by the last legislature for better equipment of the plant and for other purposes of the college, is another fruit of that movement. There will be other and perennial crops of good fruit which that movement will bear.

Farmers are conservative; they are not easily moved individually and are harder to move en masse, but when they move other things will be moved that need moving. If the university ship has been turned from its right course, little or much, or if it has been turned right about and headed the wrong way, the farmers will surely swing her around again and send her on her appointed way. They know her mission; it was clearly mapped out from the beginning, and knowing it they will see to it that she have a chance to accomplish that mission.

Lest some think otherwise let me say I have not spoken a word in any spirit of complaining—not a

word intended as an arraignment of anybody for anything that may have been done or left undone in or concerning this university.

There has been lack of information and consequent misunderstanding and disagreement among the people as to the true and lawful character, scope and purpose of our university, I have deemed it my right, perhaps my duty as a citizen and a farmer, to set forth here those purposes.

And let no one infer from any utterance of mine that I take an unfavorable or gloomy view of matters and events in general. I believe that the preponderance of human intention and human effort is toward the good. I believe that the prevailing course and tendency of human institutions is toward the better. They may travel sometimes obliquely — zigzag — wrong end foremost — upside down—or at times seem to go backwards, but altogether they get onward and upward.

Good things—better things—the best things, come not at once, but by evolution, step by step, from imperfection to excellence.

Agriculture is the peculiar science; in its beginnings simple indeed—simplest of all; in its higher development we shall see it growing complex, comprehensive, drawing to its aid, assimilating and rendering subservient all sciences and becoming in its fullest development the master science.

Since the children of men however simple and unlearned must live and maintain themselves on the

earth, and since they could live only upon the products of the tilled field, it was necessary that they be able to provide the means of sustaining life by the simplest method of field culture.

That kind providence which cares for all living things so ordered his laws that the field by the rudest implements and by untaught methods could be made to yield the necessities of life.

But since we live by agriculture we have been wont to look upon it simply as a means of living. He who finds in his vocation only the means of living becomes a joyless drudge and his vocation stagnant drudgery.

May we not see in this the reason why myriads have tired of farming and have turned away from the farm to other pursuits and professions. And in this turning away of so many from the farm to other pursuits and professions may we not find and see the cause of that marvelous development of other arts and sciences which so distinguishes our time? I do not doubt it. The excessive interest in these, the excessive number engaged in them and the excess of energy expended upon them, could have no other result but to push their development to an amazing degree of perfection.

But now on every hand we note the signs of another turning, a returning to agricultural pursuits. Other sciences and other arts are ripe now to serve their highest purpose in the development of the master science, agriculture. The professions

are full—crowded as we have seen. They no longer pay, to put it short, but that is not all nor most important; men and women conscious of power to aid in the world's needed work and inspired by sublime desire and ambition to add by their labors something to the world's comfort, happiness, and betterment, disdain to waste their trained powers where not needed. If place, success and competence are to be gained for themselves in professional life, it must too often come by displacing and defeating others.

With the condition of the unskilled laborer and the artisan in the city we are familiar. Living employment is uncertain; there are too many. The mechanic for self-preservation is compelled to limit the number of apprentices in his own craft, even to the exclusion of his own son. Professional men are hesitating to bring up their sons in their own calling. How is it with trade and commerce? There is war between individuals and corporations for trade, of which there is not enough to go round, and nations that once fought for liberty and honor are now ready to fight for trade.

The way out of it all is to the farm. To the farm is the place to go now, and to farm is the thing to do. People see it; not only plain men now, but schooled, educated, learned men see it, and the more they know the better they see it. Necessity may be the ointment that is opening their eyes, but they see it all the same. To my young friends who question me as to the most promising field for

effort now, I answer without hesitation, the corn field.

We are about to return—we are returning to agriculture. We are taking another step in the evolution of better things for mankind.

To the half employed, to the disappointed, discontented, striving, struggling millions in other over-crowded pursuits, agriculture says come unto me and I will give you employment; I will give you food and clothing; I will give you homes; I will give you contentment and honor; I will give you peace.

But we are returning to a new agriculture, an agriculture lighted and glorified by science. To the new agriculture the agricultural college and experiment station will be the main gateway.

The agricultural college and experiment station is one of the wisest conceptions of this or of any age.

It should not be regarded as merely a help to agriculture or an aid, however valuable; such an estimate falls short of the truth. It is a necessary, an indispensable agent in the development of a better and more profitable and more engaging agriculture. The individual farmer cannot experiment profitably. Agricultural experiments for the most part require some years for their completion. There must be parallel experiments under varying conditions. Exact records must be preserved. Expensive apparatus is often required. I need not recount the

obstacles to successful experimentation by individual farmers; they are numerous and practically insurmountable.

If for no other reason, a college or association of some kind is necessary, because experiments if left dependent upon the life and health and inclination of private persons would almost certainly fail.

Although comparatively new institutions, colleges of agriculture have abundantly proved their value.

To their credit stand already discoveries of incalculable value to mankind—discoveries which in their nature would not and could not have been made outside the Agricultural College. Where could the thought have been born, except in the environment of the Agricultural College, that our greatest product—corn—might be changed in the proportions of its chemical constituents? Even if the idea had occurred to some farmer of contemplative mind, what could he do with it? How could the change be effected? Could such changes be made as would widen the uses and increase the value of corn?

Without the College and Experiment Station, these questions would have to go unsolved. In this, our Agricultural College, a man has thought, believed, proved that the chemical constituents of corn may be so changed in their proportions as to make of it almost a balanced or complete food for our domestic animals. There is no calculating the value of this discovery. All intelligent feeders have known

that our great food crop was deficient in the protein necessary for normal growth and development of our domestic animals. This protein we must supply at any cost. Which of us and when, would have thought and learned how to breed an increased proportion of protein into our corn. Not only this, he has proved that for various other special uses corn may be so bred as to largely increase its value and selling price for those uses.

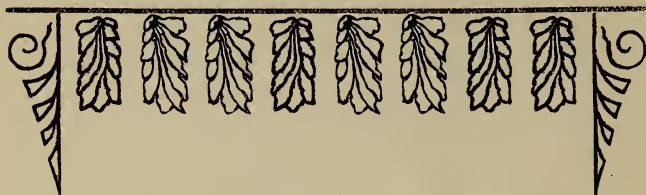
I believe that this discovery alone—that the proportions of the chemical constituents of corn can be changed, and the more valuable parts materially increased, will be worth in dollars and cents to the farmers of Illinois a sum beside which all that has been or will be appropriated to our Agricultural College will appear insignificant. My estimate of the value of Professor Hopkins' discovery is not of course capable of mathematical proof, but I have intended to speak of his discovery in reasonable and probable terms, and I believe that I have.

Without doubt a reasonable amount of public money judiciously expended on our Agricultural College will return an hundred fold to the common good.

We are met here to dedicate this great building, the largest agricultural college building, I believe, in the world. It is consistent—we are the greatest agricultural community, and this building stands in the center of the largest tract of the most productive land comprised in any single state. It will be

well equipped. We have a corps of instructors, many of them already renowned for eminent service to agriculture; all are learned and skilled in their art, and devoted to it.

To the great art—the greatest—we dedicate our splendid building.



UNIVERSITY OF ILLINOIS-URBANA



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